

Abstract of the Disclosure

A CMOS image sensor having spacers on sidewalls of a gate electrode in an unsymmetrical form is provided to increase a voltage swing width and reduce a dark current. The CMOS image sensor includes: a semiconductor structure having an impurity region and a gate electrode; a first spacer formed on one sidewall of the gate electrode, wherein the first spacer is overlapped with a portion of the impurity region; a second spacer formed on a sidewall of the first spacer; and a third spacer formed on the other sidewall of the gate electrode.